

REMARKS

In response to the Office Action mailed April 14, 2008, Applicant respectfully requests reconsideration. Claims 1-30 were previously pending in this application. In this paper, claims 1, 2, 6, 11-13, 16, 21, 22 and 26 have been amended and claim 26 has been cancelled. As a result, claims 1-25 and 27-30 are pending with claims 1, 11, and 21 being independent claims. No new matter has been added.

I. Overview of the Disclosure

As an aid to the Examiner, the Applicant provides a brief summary of the application. This summary is not intended as a substitute for the Examiner reading the application in its entirety and is not intended to characterize the claims or any terms used in the claims, which are discussed individually below.

Briefly, the present application describes a method and system that allows mobile network nodes to maintain network connectivity with a corresponding node even after the corresponding node and / or mobile node's assigned network address changes. The mobile node can register its new address with an authoritative name server and therefore does not rely upon a home agent (page 5, lines 1-20). Naming requests for the mobile node are resolved by reference to name / address resolution information maintained in the authoritative name server (page 17, lines 4-6).

When a mobile node moves from one location to another, a policy stored in the mobile node determines if the mobile node has moved outside the security domain of the mobile node's home network (page 19, lines 3-13). The policy can include network addresses of the mobile node's home network. After a determination is made that the mobile node has moved outside the security domain of the mobile node's home network, a tunnel connection is established with a virtual private network (VPN) server and the VPN server then provides a new address for the mobile node (page 19, lines 13-24).

II. Rejections Under 35 U.S.C. §103

Claims 1, 2, 8, 10-12, 18, 20-22, 28 and 30 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over U.S. Patent No. 6,904,466 ("Ishiyama") and further in view of U.S.

Patent No. 7,116,654 (“Kim”). Claims 3, 6, 7, 13, 16, 17, 23, 26 and 27 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim and further in view of U.S. Patent No. 6,452,920 (“Comstock”). Claims 4, 5, 9, 14, 15, 19, 24, 25 and 29 were rejected under 35 U.S.C. §103(a) as purportedly being obvious over Ishiyama in view of Kim in view of Comstock and further in view of U.S. Patent No. 6,434,627 (“Millet”). Applicants respectfully traverse the rejections to the extent they are maintained over the claims as amended herein.

A. Discussion of Ishiyama

Ishiyama is related to a mobile communication scheme for mobile nodes without using home agents (Abstract). In Ishiyama, a mobile computer maintains communication with a correspondent node by transmitting a packet having the home address as an original source address and an outer packet having a current location address (or “Care of Address”) as a source address (Abstract, Fig. 4, Col. 8, lines 50-65). Thus, upon receiving the transmitted packet, the correspondent node will know the destination and final destination address of any packet that needs to be transmitted to the mobile computer. When the mobile computer moves to a new address, the mobile computer notifies the DNS server of the new address and the current location address in the outer packet changes to the new updated Care of Address address (Col. 8, lines 8-58; col. 9, lines 11-26).

B. Discussion of Kim

Kim is related to a routing optimization method for a mobile internet protocol system. A mobile host is assigned a care-of-address (COA) when it connects to the Internet from a changed point of attachment (Abstract). Subsequently, the mobile host sends a registration request containing the COA to the mobile host’s home agent via a foreign agent (Abstract). The home agent then stores the COA in relation to a domain name of the mobile host in an internal domain name server (DNS). When a correspondent node queries the home agent, the home agent sends the COA corresponding to the domain name along with caching prevention information to the correspondent node. The caching prevention information prevents the correspondent node and other DNS from caching the COA of the mobile host (Col. 2, lines 20-40).

C. Discussion of Comstock

Comstock is related to the use of Mobile IP binding information to deliver mobile terminating packets between a corresponding node and a mobile node using Layer-2 tunneling. A home agent within the home network and a foreign agent is a router that performs the Mobile IP functionality (Col. 2, Lines 9-14). The home address and “care-of” address are registered with the home network (Col. 2, Lines 15-25). Comstock does not mention whether or not the address is cached elsewhere within the network or that any values are specified to either cause or prevent such caching.

D. Independent Claim 1

Claim 1 recites, *inter alia*, registering the second address, for the mobile node, with an authoritative name server without using a home agent, wherein the registering step comprises: specifying the second address for the mobile node, and specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers. The Office Action alleges that Ishiyama in view of Kim teaches all limitations of claim 1. Applicants respectfully disagree and respectfully suggest that the combination of Ishiyama and Kim is not proper.

As noted above, Ishiyama teaches a mobile communications scheme without using home agents whereas Kim teaches a mobile IP system using a home agent. In Mobile IP schemes, as taught by Kim, care of addresses (CoA) are registered and stored with a home agent (Abstract). On the contrary, in Ishiyama, the addresses are registered with a domain name server (Col. 8, lines 8-14; col. 9, lines 11-26). Ishiyama’s invention focuses on not utilizing home agents in communication schemes and thus teaches away from schemes involving home agents as taught by Kim. For example, by transmitting packets with two addresses (Care of Address and home address), Ishiyama allows connectivity between a mobile node and correspondent node without the use of home and foreign agents. Kim teaches the use of home and foreign agents. It would not have been obvious to one of ordinary skill in the art to combine the teachings of Ishiyama with Kim since both references teach contradictory mobile connectivity schemes. The use of Kim (and Comstock) as cited art is also not proper since claim 1, as amended, specifically recites “without using a home agent,” and Kim (and Comstock) explicitly teaches the use of a home agent.

Accordingly claim 1 patentably distinguishes over Ishiyama and Kim, considered alone or in combination. Therefore, withdrawal of the rejection of claim 1 is respectfully requested.

Claims 2-10 depend from claim 1 and are patentable based at least upon their dependency.

E. Independent Claim 11

Claim 11 recites, *inter alia*, registering the second address, for the mobile node, with an authoritative name server without using a home agent, wherein the registering step comprises: specifying the second address for the mobile node, and specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers.

The Office Action alleges that Ishiyama in view of Kim teaches all limitations of claim 11. Applicants respectfully disagree and respectfully suggest that the combination of Ishiyama and Kim is not proper for the reasons explained above. Ishiyama and Kim teach contradictory mobile connectivity schemes and Ishiyama can not be considered or applied in view of Kim.

Accordingly, claim 11 patentably distinguishes over Ishiyama and Kim, considered alone or in combination. Therefore, withdrawal of the rejection of claim 11 is respectfully requested.

Claims 12-20 depend from claim 11 and are patentable based at least upon their dependency.

F. Independent Claim 21

Claim 21 recites, *inter alia*, determining, via a policy maintained by the mobile node, that the mobile node is located outside a security domain of a home network of the mobile node; establishing a virtual private network tunnel connection through a virtual private network server, an address of the virtual private network server being specified by the policy; receiving, from the virtual private network server, the second address for the mobile node; and registering the second address with an authoritative name server without using a home agent, wherein the registering step comprises: specifying the second address for the mobile node, and specifying a supplementary value that ensures the second address will not be cached within non-authoritative name servers.

As noted above, the combination of Ishiyama and Kim is not proper. Furthermore, Applicants respectfully submit that Ishiyama and Kim, considered alone or in combination, fail to teach all limitations recited in claim 21. For example, while Ishiyama and Kim teach mobile

connectivity schemes in which a mobile node's new address is updated, both Ishiyama and Kim fail to teach or suggest using a policy maintained by the mobile to determine that the mobile node is located outside a security domain of a home network of the mobile node, as recited in claim 21, as amended. In addition, Ishiyama and Kim also fail to teach or suggest an address of the virtual private network server being specified by the policy and receiving, from the virtual private network server, the second address for the mobile node as recited by claim 21.

Accordingly, claim 21 patentably distinguishes over Ishiyama and Kim, considered alone or in combination. Therefore, withdrawal of the rejection of claim 21 is respectfully requested.

Claims 22-30 depend from claim 21 and are patentable based at least upon their dependency.

IV. Comments on Dependent Claims

A number of dependent claims recite limitations that further patentably distinguish over Ishiyama, Kim, Comstock and Millet, considered alone or in combination.

For example, claim 3 recites "receiving, by the mobile node, a binding update acknowledgement from the correspondent node." The Office Action alleges that the combination of Ishiyama, Kim, and Comstock teaches the limitations of claim 3. However, on page 6, the Office Action acknowledges that Ishiyama and Kim fail to teach or suggest a binding update and uses Comstock to cure this deficiency. Applicant would like the Examiner to note that, in rejecting claim 2, which also recites a limitation related to issuing a binding update, the Office Action alleged that Ishiyama and Kim teach a binding update. Applicant respectfully requests withdrawal of the rejection of claim 2 since the Examiner acknowledges that Ishiyama and Kim fail to teach a binding update.

Notwithstanding the contradiction in the rejections of claims 2 and 3, Comstock also fails to teach said limitation of claim 3. As noted in the discussion of Comstock, Comstock is related to a Mobile IP connectivity scheme in which "a home agent (which) maintains a data base of a binding between the mobile node's address and the address of a foreign agent that the mobile node is attached to" (Col. 3, lines 27-39). Comstock can not teach the limitations of claim 3 since claim 1 (claim 3 depends from claims 2 and 1) explicitly states "without using a home agent." In Comstock, the mobile connectivity method relies on home agents and uses a home agent to maintain a data

base of binding updates. This is in contrast to Applicant's claims which recite (in claim 1) "without using a home agent." Claims 13 and 23 recite limitations similar to claim 3. Accordingly, withdrawal of the rejection of claims 3, 13 and 23 is respectfully requested.

Other dependent claims also recite limitations not taught or suggested by the cited art. For example, Ishiyama, Kim, Comstock, and Millet, considered alone or in combination, fail to teach or suggest "registering a binding update failure with regard to the first binding update issued to the correspondent node at the first correspondent node address" as recited in claims 4, 14 and 24, and "issuing a second binding update to the correspondent node, wherein a specified destination address for the second binding update specifies the second correspondent node address," as recited in claims 5, 15 and 25. Accordingly, withdrawal of the rejection of claims 4, 5, 14, 15, 24 and 25 is respectfully requested.

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicant believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicant does not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor does the Applicant concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicant reserves the right to specifically address the patentability of the dependent claims in the future.

CONCLUSION

It is respectfully believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment set forth in the Office Action does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Furthermore, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify any concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicant's representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70179US00.

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Respectfully submitted,

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